

Wireless Broadband Deployment Overview of State & Local Authority

Presentation to the Town of Andover Board of Selectmen

MASSACHUSETTS DEPARTMENT OF TELECOMMUNICATIONS & CABLE

LINDSAY DEROCHE, DIRECTOR

COMPETITION DIVISION

APRIL 22, 2019



Department of Telecommunications & Cable

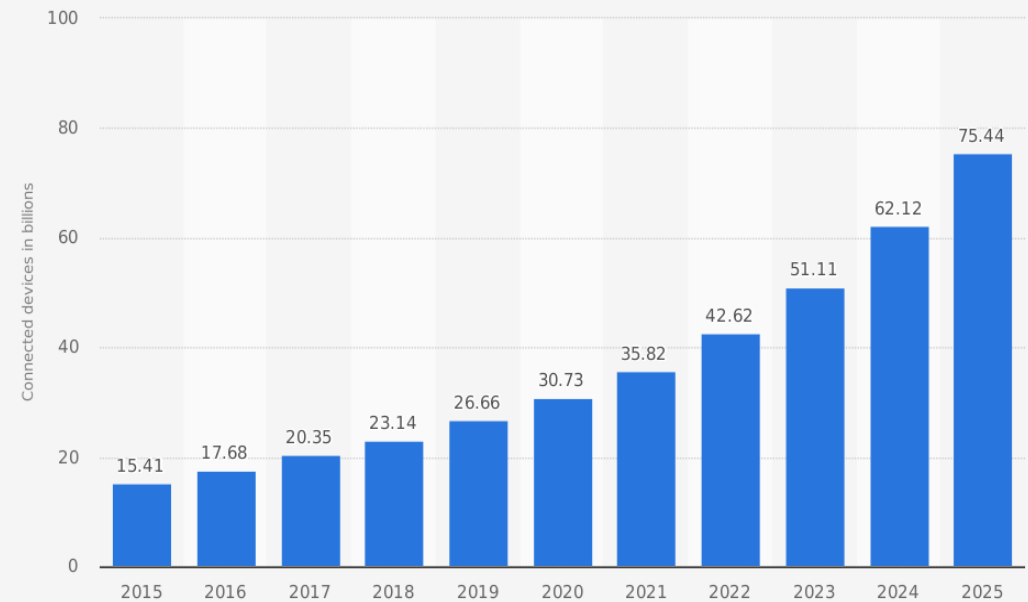
- Oversight of the traditional telephone market in Massachusetts
- Oversight of cable television services in Massachusetts
- Consumer assistance and complaint resolution
- Communications market monitoring
 - Joint jurisdiction with DPU over utility pole attachments
 - Member of FCC's Broadband Deployment Advisory Group

Wireless Broadband

Demand for data is driving cellular deployment

- 4G LTE technology is here to stay but has limits
- Dual path to add capacity (densification)
- Small Cell Deployment
- 5G millimeter wave

Internet of Things (IoT) connected devices installed base worldwide from 2015 to 2025 (in billions)



Source
IHS
© Statista 2018

Additional Information:
Worldwide; IHS; 2015 to 2016

Small Cell Technology

- Small cells or micro-antenna consist of a small antenna connected to a base station.
- Typically attached to a vertical structure like a utility pole or light post.
- Small cells require power and internet connections.

A photograph of a brick building with a 'NO STOPPING' sign on a utility pole. The building is made of red brick and has two windows on the upper floor. A utility pole is in the foreground, and a 'NO STOPPING' sign is attached to it. The sign is white with black text and a black arrow pointing to the right. The building has a red brick facade and a red brick lintel above a doorway. There are some white marks on the brick wall to the left of the doorway. The sky is visible in the top right corner.

NO
STOPPING





Small Cell Technology Cont.

- Small cells vary greatly in size, shape, and layout.
- Typically placed 20-40 ft. above ground level.
- Range is anywhere from a few hundred to a thousand feet.
- Sites are 4G for now, may be used for 5G in the future.
- Technology is seen as a supplement to and not a replacement for macro cell network.

Small Cell Impact

- ❑ As the demand for internet bandwidth grows, wireless ISPs are helping to meet this need by deploying small cells in areas where demand is high but macro towers are impracticable. By using small cells to supplement coverage in these high demand areas, carriers can increase capacity and service quality.
- ❑ Because small cells only cover a small area, providers need to install many more antenna than a traditional macro cell installation.
- ❑ The increase in the number of sites needed for small cell networks has prompted providers to seek ways to reduce the barriers to small cell placement.
- ❑ Barriers the industry has identified include regulatory hurdles such as local grants of location and zoning ordinances, attachment fees, and unduly long time delays for application approvals and attachment make ready work on utility poles.

Pole Attachment Framework

➤ Federal Laws 47 U.S.C. §§ 224, 253, 332

- Access to the right of way should be competitively neutral and nondiscriminatory
- Local ROW managers may seek reasonable compensation for access and use of local rights of way
- Municipalities have 90 days to review cell tower applications for zoning and land use restrictions

➤ State Laws M.G.L.c. 166, §§ 22, 25A

- Massachusetts has asserted jurisdiction over utility pole attachments
- Requires nondiscriminatory access (except MLP poles)
- Permits municipal review of attachments

➤ Municipal Laws

- Zoning ordinances, building requirements, public safety concerns, etc.

Federal Developments

FCC Docket

- Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment (WT Docket No. 17-79, FCC 17-38)
 - March 2018 – Excluded “small wireless facilities” (28 cubic ft.) from National Historic Preservation Act and National Environmental Policy Act review
 - August 2018 – Bans both express and de facto moratoria on the processing or approval of permits for ***all*** telecommunications facilities
 - September 2018 – FCC issues Third Report and Order prohibiting state and local regulations that “materially inhibit” the deployment of 5G infrastructure

FCC Order Application

“Small Wireless Facility” (1) The structure on which antenna facilities are mounted— (i) Is 50 feet or less in height (including the antenna), or (ii) Is no more than 10 percent taller than other adjacent structures, or (iii) Is not extended to a height of more than 10 percent above its preexisting height as a result of the collocation of new antenna facilities; and (2) Each antenna (excluding associated antenna equipment) is no more than three cubic feet in volume; and (3) All antenna equipment associated with the facility (excluding antennas) are cumulatively no more than 28 cubic feet in volume; and (4) The facility does not require antenna structure registration under part 17 of this chapter; (5) The facility is not located on Tribal lands, as defined under 36 C.F.R. § 800.16(x); and (6) The facility does not result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in Rule 1.1307(b) (m) Structure means a pole, tower, base station, or other building, whether or not it has an existing antenna facility, that is used or to be used for the provision of personal wireless service (whether on its own or comingled with other types of services).

FCC Order Summary

Effective January 14, 2019

- Application Shot Clocks 10/60/90 days
- Allows batch applications
- Cap on application fee(s)
 - \$500 per application (up to 5 nodes) \$100 per additional node
 - \$1000 for a new pole
- Recurring fees must be non-discriminatory and cost-based
 - \$270 per facility including RoW and attachment fees
- Limits spacing requirements

FCC Order Summary Cont.

- ❑ Municipalities may impose aesthetic requirements if they are (1) reasonable, (2) no more burdensome than those applied to other types of infrastructure deployments, and (3) published in advance.
- ❑ Spacing requirements are treated as aesthetic restrictions
- ❑ Undergrounding is deemed to “effectively prohibit” deployment and is therefore preempted
- ❑ Redefines Right-of-Way to include “the area on, below, or above a public roadway, highway, street, sidewalk, alley, utility easement, or similar property”
- ❑ Failure to comply with shot clocks is deemed and “effective prohibition”
- ❑ **NO DEEMED GRANTED**

What to Expect

- Order is being appealed in the 9th Cir.
- 21 states have passed small cell legislation
- Industry will test the waters
- Comprehensive agreements between municipalities and providers (Boston/Verizon)

Tips & Guidelines

- Review your municipal rules and ordinances to ensure they comply with the new standard and are adequate to protect your community interests.
- Be mindful of your internal process for reviewing applications and understand how they are impacted by the shot clocks. Remember you have one opportunity to check for completeness.
- Review your application forms to ensure you are requiring all information necessary to make a decision. You may ask for detailed information about the specific installation or attachment including schematics of ancillary or equipment that is necessary to operate the wireless facility. You may not require a showing of need.
- Do not adopt a moratoria or fee structure that is not cost based.
- Consider pre-submittal conferences, comprehensive provider agreements, and pre-approved design standards as tools to help you deal with large requests.

Questions

lindsay.deroche@mass.gov

617-368-1112